

Claims

1. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of hematological diseases,  
5 cardiovascular diseases, disorders of the peripheral and central nervous system, respiratory diseases like COPD and asthma, and genito-urolological disorders in a mammal comprising the steps of
  - i) contacting a test compound with a NPFF2 polypeptide,  
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  - ii) detect binding of said test compound to said NPFF2 polypeptide.
2. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of hematological diseases,  
15 cardiovascular diseases, disorders of the peripheral and central nervous system, respiratory diseases like COPD and asthma, and genito-urolological disorders in a mammal comprising the steps of
  - i) determining the activity of a NPFF2 polypeptide at a certain concentration of a test compound or in the absence of said test compound,  
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  - ii) determining the activity of said polypeptide at a different concentration of said test compound.
- 25 3. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, disorders of the peripheral and central nervous system, respiratory diseases like COPD and asthma, and genito-urolological disorders in a mammal comprising the steps of  
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- i) determining the activity of a NPFF2 polypeptide at a certain concentration of a test compound,
- ii) determining the activity of a NPFF2 polypeptide at the presence of a compound known to be a regulator of a NPFF2 polypeptide.
4. The method of any of claims 1 to 3, wherein the step of contacting is in or at the surface of a cell.
5. The method of any of claims 1 to 3, wherein the cell is in vitro.
6. The method of any of claims 1 to 3, wherein the step of contacting is in a cell-free system.
7. The method of any of claims 1 to 3, wherein the polypeptide is coupled to a detectable label.
8. The method of any of claims 1 to 3, wherein the compound is coupled to a detectable label.
9. The method of any of claims 1 to 3, wherein the test compound displaces a ligand which is first bound to the polypeptide.
10. The method of any of claims 1 to 3, wherein the polypeptide is attached to a solid support.
11. The method of any of claims 1 to 3, wherein the compound is attached to a solid support.
12. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of hematological diseases,

cardiovascular diseases, disorders of the peripheral and central nervous system, respiratory diseases like COPD and asthma, and genito-urological disorders in a mammal comprising the steps of

- 5           i)       contacting a test compound with a NPFF2 polynucleotide,
- ii)       detect binding of said test compound to said NPFF2 polynucleotide.
13.       The method of claim 12 wherein the nucleic acid molecule is RNA.
- 10       14.       The method of claim 12 wherein the contacting step is in or at the surface of a cell.
15.       The method of claim 12 wherein the contacting step is in a cell-free system.
- 15       16.       The method of claim 12 wherein polynucleotide is coupled to a detectable label.
17.       The method of claim 12 wherein the test compound is coupled to a detectable label.
- 20       18.       A method of diagnosing a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, disorders of the peripheral and central nervous system, respiratory diseases like COPD and asthma, and
- 25       genito-urological disorders in a mammal comprising the steps of
- i)       determining the amount of a NPFF2 polynucleotide in a sample taken from said mammal,
- 30       ii)       determining the amount of NPFF2 polynucleotide in healthy and/or diseased mammals.

19. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, disorders of the peripheral and central nervous system, respiratory diseases like COPD and asthma, and genito-urological disorders in a mammal comprising a therapeutic agent which binds to a NPFF2 polypeptide.
20. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, disorders of the peripheral and central nervous system, respiratory diseases like COPD and asthma, and genito-urological disorders in a mammal comprising a therapeutic agent which regulates the activity of a NPFF2 polypeptide.
21. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, disorders of the peripheral and central nervous system, respiratory diseases like COPD and asthma, and genito-urological disorders in a mammal comprising a therapeutic agent which regulates the activity of a NPFF2 polypeptide, wherein said therapeutic agent is
- i) a small molecule,
  - ii) an RNA molecule,
  - iii) an antisense oligonucleotide,
  - iv) a polypeptide,
  - v) an antibody, or
  - vi) a ribozyme.
22. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, disorders of the peripheral and central nervous system, respiratory

diseases like COPD and asthma, and genito-urological disorders in a mammal comprising a NPFF2 polynucleotide.

23. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, disorders of the peripheral and central nervous system, respiratory diseases like COPD and asthma, and genito-urological disorders in a mammal comprising a NPFF2 polypeptide.

24. Use of regulators of a NPFF2 for the preparation of a pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, disorders of the peripheral and central nervous system, respiratory diseases like COPD and asthma, and genito-urological disorders in a mammal.

25. Method for the preparation of a pharmaceutical composition useful for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, disorders of the peripheral and central nervous system, respiratory diseases like COPD and asthma, and genito-urological disorders in a mammal comprising the steps of

i) identifying a regulator of NPFF2,

ii) determining whether said regulator ameliorates the symptoms of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, disorders of the peripheral and central nervous system, respiratory diseases like COPD and asthma, and genito-urological disorders in a mammal; and

iii) combining of said regulator with an acceptable pharmaceutical carrier.

26. Use of a regulator of NPFF2 for the regulation of NPFF2 activity in a mammal having a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, disorders of the peripheral and central nervous system, respiratory diseases like COPD and asthma, and genito-urological disorders.
- 5